

We claim:

1. A process for preparing a thin film on a high stalk extrusion line, said process comprising:
 - (a) extruding a blend through an annular die to form a molten material tube, said blend comprising:
 - (i) a linear low density polyethylene (LLDPE); and
 - (ii) a high molecular weight polyethylene selected from a high density polyethylene (HMW-HDPE) or a high molecular weight, medium density polyethylene (HMW-MDPE);in a weight ratio of (i)/(ii) greater than or equal to 50/50; and
 - (b) pulling the molten material tube around a fixed internal orientation device (FIOD) to form the film.
2. The process of claim 1 wherein the weight ratio of (i)/(ii) is greater than or equal to 60/40.
3. The process of claim 1 wherein the weight ratio of (i)/(ii) is greater than or equal to 70/30.
4. The process of claim 1 wherein the LLDPE has a density within the range of about 0.90 to about 0.93 g/cc and an MI_2 within the range of about 0.5 to about 50 dg/min.
5. The process of claim 1 wherein the HMW-HDPE has a density within the range of about 0.95 to about 0.97 g/cc and an MI_2 within the range of about 0.01 to about 0.5 dg/min.
6. The process of claim 1 wherein the HMW-MDPE has a density within the range of about 0.93 to about 0.95 g/cc and an MI_2 within the range of about 0.01 to 0.5 dg/min
7. The process of claim 1 wherein the film has a thickness of 1 mil or less.
8. The process of claim 1 wherein the film has a thickness of 0.75 mil or less.
9. The process of claim 1 wherein the film has a thickness of about 0.5 mil or less.

10. The process of claim 1 wherein the film has a machine-direction tear of 18 grams or greater.
11. The process of claim 1 wherein the film has a machine-direction tear of 40 grams or greater.
12. A thin film produced from a blend that consists essentially of:
 - (a) from about 20 wt % to about 80 wt % of a high molecular weight, medium density polyethylene (HMW-MDPE) that has a density within the range of about 0.93 to about 0.95 g/cc, an MI_2 within the range of about 0.01 to about 0.5 dg/min, an MFR within the range of about 50 to about 300, and a multimodal molecular weight distribution comprising a low molecular weight component and a high molecular weight component wherein the low molecular weight component has an MI_2 from about 50 to about 600 dg/min and a density from about 0.94 to about 0.97 g/cc; and
 - (b) from about 20 wt % to about 80 wt % of a linear low density polyethylene that has a density within the range of about 0.90 to about 0.93 g/cc and an MI_2 within the range of about 0.5 to about 50 dg/min.
13. The film of claim 12 wherein the LLDPE is a copolymer of ethylene with an alpha-olefin selected from the group consisting of propylene, 1-butene, 1-pentene, 1-hexene, 1-octene, 4-methyl-1-pentene, and mixtures thereof.
14. The film of claim 12 wherein the LLDPE is a copolymer of ethylene with 1-hexene.
15. The film of claim 12 wherein the HMW-MDPE has a density within the range of about 0.93 to about 0.94 g/cc.
16. The film of claim 12 wherein the HMW-MDPE has an MI_2 within the range of about 0.01 to about 0.3 dg/min.
17. The film of claim 12 having a thickness of 1 mil or less.
18. The film of claim 12 having a thickness of 0.75 mil or less.
19. The film of claim 12 having a thickness of about 0.5 mil or less.

- 20.** The process of claim 12 wherein the film has a machine-direction tear of 18 grams or greater.
- 21.** The process of claim 12 wherein the film has a machine-direction tear 40 grams or greater.
- 22.** A method for preparing a thin film, said method comprising:
- (a) blending
 - (i) from about 20 wt % to about 80 wt % of an HMW-MDPE that has a density within the range of about 0.93 to about 0.95 g/cc, an MI_2 within the range of about 0.01 to about 0.5 dg/min, an MFR within the range of about 50 to about 300, and a multimodal molecular weight distribution comprising a low molecular weight component and a high molecular weight component wherein the low molecular weight component has an MI_2 from about 50 to about 600 dg/min and a density from about 0.94 to about 0.97 g/cc; and
 - (ii) from about 20 wt % to about 80 wt % of an LLDPE that has a density within the range of about 0.90 to about 0.93 cc/g and an MI_2 within the range of about 0.5 to about 50 dg/min; and
 - (b) converting the blend of (a) into a thin film using a fixed internal orientation device (FIOD) on a high stalk extrusion line.